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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,711	08/02/2001	Chiaki Kasada	KASADA-4	6303

7590 08/01/2006

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EXAMINER	
ANGEBRANNDT, MARTIN J	
ART UNIT	**PAPER NUMBER**
1756	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/890,711	KASADA ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/09/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-8,10-12,15 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-8,10-12,15 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The response of the applicant has been received and made of record. Responses to the arguments of the applicant are presented after the first rejection to which they are directed. Claims 6-8,10-12,15 and 18 are active. Rejections of the previous office action not repeated below are withdrawn based upon the amendments to the claims and corresponding arguments.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-8 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 8,12,15 and 18, are these in addition to these compounds which are used as counterions ? See the specification at pages 9-10 and at page 32, where it is clear that the "The light resistance improvers are not necessarily other compound(s) which exist separately from the styryl dyes of the present invention ...organic metal complex anions ..."

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 6-8 and 10-12 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 60-083892

See examples 2-5 in table 1 on page 22. These use dyes D-17 and D-21 on page 7. The singlet oxygen quenchers both absorb in the visible and act to stabilize the other dyes.

The dye is cationic and needs a anion as the counterion and the quencher is an anion with a cationic counterion, these will exchange ions in solution and at least some of the composund of the dyes D-17 or D21 with the quencher as the counterion will be present in the dyes solution and the resulting coated optical recording medium film.

The applicant could limit the claims to "consisting essentially of" and either present or point to evidence in the specification showing the argued advantage or the applicant might consider limiting the moiety ϕ_2 to moieties recited on page 8 of the instant specification to exclude the heterocycles forming the nitrogen containing ring on the left side of formula I on page 4 of the reference.

The arguments of the applicant appear to neglect the exchange of ions, which occurs in solution between different ionic compounds.

7. Claims 6-8,10-12,15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-232995, in view of Okusa et al. '046.

JP 60-232995 teaches the use of dyes of formula II, where Y2 is a heterocyclic moiety, L_1 and L_2 are CH, l_2 is 1, R_{21} is alkyl and R_{22} is a monovalent group (page 7). The use of the singlet

oxygen quenchers shown ion pages 19-21 is disclosed. Examples 1-10 show mixtures of dyes in the recording layer (table 1, page 32).

Okusa et al. '046 teaches dyes II-25,II-28, II-32, II-53,II-56,II-58,II-66,III-2, III-14,II-15,III-21,III-31,III-32,III-44,III-45. Example 115 in table 1 uses III-44. These are sensitizing agents (51/24-33). Note that these are shown to be superior to the comparative compounds CR-1 through CR-5 which are p-dialkyl substituted. See various moieties (40/39-55). The groups for R_{21} to R_{25} of formula II in column 2 may be hydrogen, alkyl, halogen, alkoxy, aryl, hydroxyl or heterocycles. (2/63-67).

It would have been obvious to modify examples 4 and 5 in table 1 on page 32, which use dye D20 and D24, which include styryl dyes D^+ II-2 or D^+ II-7 respectively (page 9 and 21), where the monovalent moiety is a dialkylamino group, by replacing the dialkylamino moieties with halogens, cyano, alkoxycarbonyl or heterocycle moiety with a reasonable expectation of forming a useful optical recording medium which has an improved sensitivity over that of examples 4 and 5. The examiner had an oral spot translation made, if the applicant has an English translation made, the examiner would appreciate a copy with the subsequent response.

The arguments of the applicant appear to neglect the exchange of ions, which occurs in solution between different ionic compounds.

8. Claims 6-8,10-12,15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-232995, in view of Okusa et al. '046, further in view of Namba et al. 231, JP 51-018530 and Miura et al. JP 63-256945.

Namba et al. 231 teaches the sensitization across the entire spectrum by using mixtures of dyes to allow various lasers to be used with the recording medium. This allows the medium to be used with any player.

Miura et al. JP 63-256945 in the examples in table 1, which use dye B (lower left column ,page 6) which is disclosed as having an absorption maxima of 387 nm together with another dye. Dyes 14,9,3,7,13 (pages 2-3) used in the examples in table 1 are also within the scope of coverage sought.

In addition to the basis provided above, the examiner cites Namba et al. 231 to establish the desirability of having optical recording media which are sensitive at about 400 nm and JP 51-018530 and Miura et al. JP 63-256945 are cited to support the examiner's position that the dyes inherently absorb in this range and thereby serve to sensitize the recording media to this wavelength range.

The rejection stands for the reasons above.

9. Claims 6-8,10-12,15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-314460, in view of JP 60-232995, Okusa et al. '046, and Namba et al. 707.

JP 11-314460 (cited 9/15/04, machine translation attached to this action) teaches styryl dyes having the formula 1 or 2 on page 2. A may be alkyl, alkoxy, acyl, hydrogen, halogen or aryl; n may be 1-4, Y is an alkoxy or halogen, X is alkyl, formylamino, alkylcarbonylamino, benzoylamino or halogen and M is an anion. [0007]. M may be a transition metal complex, such as benzenedithiol, naphthalenedithiol and ethene dithiol [0022-0023]. The use of transition metal complexes as anti-oxidants is disclosed. [0042]. The addition of other dyes including indoaniline, phthalocyanine cyanine, azo metal chelates and other is disclosed. [0041]. Examples

teache recording media where a dye solution is coated from solution and a reflective layer applied.

Namba et al. 707 teaches that the formation of a single salt dye where the cation is a cyanine dyes and the anion is a quencher. The data in tables 1 and 2 show that the reflectance stability of the dye composition (a measure of stability) is better and the deterioration is reduced when the single salt is used than when the cyanine dye and quencher are added separately (as in the comparative/control examples)(col. 37-38 and text at 1/44-62 and 4/10-44).

It would have been obvious to one skilled in the art to modify the cited example of JP 11-314460 by using a transition metal complex, such as benzenedithiol, naphthalenedithiol and ethene dithiol as the counterion to gain improved efficacy in the anti-oxidant effects described at [0022-0023,0042] based upon the teachings relating to single salts with cyanine dyes as discussed by Namba et al. 707 and to use styryl dyes with other monovalent moieties in place of the dialkylamino groups, such as halogens, cyano, alkoxycarbonyl or heterocycle moiety with a reasonable expectation of forming a useful optical recording medium which has an improved sensitivity over that of examples 4 and 5 based upon the teachings of Okusa et al. '046 and the teachings of the equivalence of various monovalent groups by JP 60-232995. Further, it would have been obvious to add other dyes to the recording composition based upon the teachings of JP 11-314460 including metallized azo dyes and the like.

This rejection addresses the issues raised by the applicant including the disclosure of dye quencher single salts.

10. Claims 6-8,10-12,15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-314460, in view of Honda et al. JP 08-179467 and Namba et al. 707.

Honda et al. JP 08-179467 (cited 9/15/04, machine translation attached to this action) teaches various styryl dyes in the imaging arts (photography) and discloses the equivalence between aryl and heterocyclic moeties for Q in formula 6 [0012]. The group Q may be phenyl, napthyl, pyridyl, quinolyl, pyrrolyl, imidazoylyl and the like [0032].

It would have been obvious to one skilled in the art to modify the cited example of JP 11-314460 by using a transition metal complex, such as benzenedithiol, naphthalenedithiol and ethene dithiol as the counterion to gain improved efficacy in the anti-oxidant effects described at [0022-0023,0042] based upon the teachings relating to single salts with cyanine dyes as discussed by Namba et al. 707 and to use styryl dyes with other terminal moieties in place of the phenyl group, such as the pyridyl, quinolyl, pyrrolyl, imidazoylyl based uponthe equivalence taught by Honda et al. JP 08-179467.

This rejection addresses the issues raised by the applicant including the disclosure of dye quencher single salts.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sato '496 teaches the advantages of single salts of cyanine dyes and quenchers.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Martin J Angebranndt
Primary Examiner
Art Unit 1756

07/24/2006